AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method for conveying data between terminals in a communications network comprising at least one low-bit-rate artery and at least one standard-bit-rate artery, the data to be transmitted taking the form of packets having a size smaller than the size of a basic transmission unit, the method comprising:

~~receiving, from a first originating terminal at an adaptation unit of a first switch in the communications network, data according to a first protocol;~~

converting the ~~received~~ data into coded frames using a compression algorithm;

forming a packet of application data ~~according to a second protocol, the packet of application data~~ comprising a plurality of the coded frames;

~~forming a Common Part Sublayer packet comprising the packet of application data and a Common Part Sublayer header including information required by at least one of the first or second protocols;~~

~~inserting the Common Part Sublayer packet into a first basic transmission unit at a rate of one packet per unit for transmission~~ transmitting the packet of application data via the standard-bit-rate artery to a first end of the low-bit-rate artery;

at the first end of the low-bit-rate artery[[:]],

~~extracting the Common Part Sublayer packets from the first basic transmission units and from basic transmission units received from different originating terminals;~~

multiplexing the ~~extracted Common Part Sublayer packets~~ packet of application data and one or more packets received from a different originating terminal into a ~~second~~ basic transmission unit for transmission to a second end of the low-bit-rate artery[[;]], and ~~sending~~ transmitting the ~~second~~ basic transmission unit from the first end to the second end of the low-bit-rate artery;

at the second end of the low-bit-rate artery[[:]],

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~~receiving the second basic transmission unit;~~

extracting the ~~Common Part Sublayer~~ packets from the ~~second~~ basic transmission unit[[;]], and

~~determining the~~ transmitting the packet of application data to a terminating terminal; ~~to which each of the Common Part Sublayer packets belong and inserting each of the determined Common Part Sublayer packets into a third basic transmission unit at a rate of one packet per unit; and~~

~~sending the third basic transmission unit from the second end of the low-bit-rate artery to an adaptation unit of a second switch in the communications network to which the terminating terminal is assigned; and~~

~~at the adaptation unit of the second switch:~~

~~extracting the Common Part Sublayer packet from each third basic transmission unit;~~

~~determining the address of the terminating terminal;~~

~~determining whether any Common Part Sublayer packet has been lost;~~

extracting the coded frames from the packet of application data; and

decompressing the coded frames to recreate the data ~~from the originating terminal~~.

2. (Currently amended) The method according to claim 1, further comprising:

forming a Common Part Sublayer packet comprising the packet of application data;

multiplexing ~~data in~~ the Common Part Sublayer ~~packets from the same originating terminal~~ packet into the basic transmission unit before transmission [[to]] at the first end of the low-bit-rate artery; and

demultiplexing ~~the data in~~ the Common Part Sublayer ~~packets extracted~~ packet at the second end of the low-bit-rate artery.

3. (Canceled)

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4. (Currentlyamended) The method according to claim [[1]] 2, wherein ~~the second protocol comprises~~ an AAL2 protocol~~, and wherein the AAL2 protocol~~ is used when multiplexing the Common Part Sublayer ~~packets in~~ packet into the ~~second~~ basic transmission unit.

5. (Previously presented) The method according to claim 1, wherein the packet of application data includes a fixed number of successive coded frames.

6. (Currently amended) The method according to claim 1, ~~wherein the first protocol comprises~~ further comprising receiving data to be converted into the coded frames according to an AAL1 protocol.

7. (Currently amended) The method according to claim 1, further comprising, [[if]] when the second end of the low-bit-rate artery corresponds to a first end of an additional low-bit-rate artery, repeating the multiplexing of the ~~Common Part Sublayer packets~~ packet of application data and one or more packets received from [[the]] a different originating ~~terminals in~~ terminal into a ~~second~~ basic transmission unit for transmission from the first end to a second end of the additional low-bit-rate artery.

8. (Canceled)

9. (Currently amended) The method according to claim 1, further comprising using a ~~user-to-user information (UUI) field in the~~ header of the ~~Common Part Sublayer~~ packet of application data to check the integrity of the data sent between [[the]] an originating terminal and the terminating terminal in the communications network.

10. (Currently amended) The method according to claim 1, wherein the data ~~from the originating terminal~~ comprises video or digital voice data.

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11. (Currently amended) An apparatus for data transmission between an originating terminal and a terminating terminal in a communications network comprising at least one low-bit-rate artery and at least one standard-bit-rate artery, ~~wherein the apparatus comprises~~ comprising:

a multiplexer device ~~having a packetization function and a switching function, wherein the switching function of~~ in communication with the at least one low-bit-rate artery and at least one standard-bit-rate artery, wherein the multiplexer device is configured to switch packets of compressed data transmitted in basic transmission units according to an adaptation layer protocol among several virtual lines constituted by connections in multiplexed or non-multiplexed mode, wherein data from the originating terminal transmitted on the at least one standard-bit-rate artery is multiplexed with data from another originating terminal onto the at least one low-bit-rate artery; and

an adaptation unit associated with the terminating terminal, wherein the adaptation unit is configured to[[:]] extract the packets from the basic transmission units,~~; determine whether any packet in the basic transmission units has been lost; and~~ extract the data from the packets, and decompress the data in order to recreate the data from the originating terminal.

12. (Currently amended) The apparatus according to claim 11, further comprising:

a shuffler configured to transmit first basic transmission units to the multiplexer device for transmission through the at least one low-bit-rate artery and further configured to transparently switch basic transmission units that are not to be transmitted through the at least one low-bit-rate artery, wherein ~~the packetization function of~~ the multiplexer device is further configured to extract the packets from the first basic transmission units and to insert the packets into second basic transmission units for transmission through the at least one low-bit-rate artery, and

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a table configured to determine the at least one low-bit-rate artery over which the packets in the second basic transmission units are to be transmitted.

13. (Currently amended) The apparatus according to claim [[12]] 11, wherein the adaptation layer protocol is an AAL2 protocol.

14. (Currently amended) The apparatus according to claim 13, wherein the apparatus is an ATM switch that includes the multiplexer device, and wherein the multiplexer device is configured to switch Common Part Sublayer packets among the several virtual lines constituted by the connections in multiplexed or non-multiplexed mode, the connections comprising ATM connections[[,]] in multiplexed or non-multiplexed AAL2 mode.

15. (Currently amended) A network configured to convey data between at least two terminals, ~~the network~~ comprising:

one or more low-bit-rate arteries;

one or more standard-bit-rate arteries;

a multiplexer device ~~having a packetization function and a switching function, wherein the switching function of~~ in communication with the one or more low-bit-rate arteries and the one or more standard-bit-rate arteries, wherein the multiplexer device is configured to switch packets of compressed data transmitted in basic transmission units among several virtual lines constituted by connections in multiplexed or non-multiplexed mode, wherein data from an originating terminal transmitted on the one or more standard-bit-rate arteries is multiplexed with data from another originating terminal onto the one or more low-bit-rate arteries~~, and wherein at least one multiplexer device is positioned upstream to and downstream from a data transmission on a low-bit-rate artery~~; and

a device associated with [[the]] a terminating terminal, wherein the device is configured to extract the packets from the basic transmission units, ~~determine whether any packet has been~~

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~~lost, and~~ extract the data from the packets, and decompress the data in order to recreate data from the originating terminal.

16. (Currently amended) [[A]] The network according to claim 15, wherein the multiplexer device is incorporated into an ATM switch.

17. (Currently amended) The network [[of]] according to Claim 15, ~~wherein network comprises~~ further comprising at least two [[of the]] multiplexer devices, wherein a first multiplexer device is positioned at a first end of a low-bit-rate artery and a second multiplexer device is positioned at a second end of the low-bit-rate artery,

wherein the first multiplexer device is configured to:

extract a plurality of packets from first basic transmission units received from different originating terminals[[;]] and to multiplex the extracted packets in a second basic transmission unit of a virtual ~~circuit~~ line between the first end and the second end of the low-bit-rate artery for transmission of the second basic transmission unit from the first end to the second end of the low-bit-rate artery; and

wherein the second multiplexer device is configured to:

~~receive the second basic transmission unit~~; extract the packets from the second basic transmission unit[[;]], determine the terminating terminal to which each of the packets belong[[;]], and insert each of the packets into a third basic transmission unit ~~at a rate of one packet per unit~~ for transmission to the terminating terminal.

18. (Currently amended) The method according to claim 1, ~~wherein~~ further comprising determining if ~~it is determined that any Common Part Sublayer~~ a packet has been lost, and if so, then generating conventional data to replace the lost ~~Common Part Sublayer~~ packet.

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19. (Currently amended) The method according to claim 1, wherein the packet of application data further includes a signaling byte indicating a mode of operation comprising at least one of voice, fax, ~~and the~~ or a compression algorithm.

20. (Currently amended) The apparatus according to claim 11, wherein [[if]] the adaptation unit ~~determines that any~~ is further configured to determine whether a packet has been lost~~, the adaptation unit is further configured~~ and to generate conventional data to replace the lost packet.

21. (Currently amended) The network according to claim 15, wherein [[if]] the device ~~determines that any~~ is further configured to determine whether a packet has been lost~~, the device is configured~~ and to generate conventional data to replace the lost packet.

22. (New) Apparatus for data transmission in a communications network, comprising:

a first adaptation unit associated with an originating terminal, wherein the first adaptation unit is configured to receive, from the originating terminal, data according to a first protocol, convert the received data into coded frames using a compression algorithm, form a packet of application data comprising a plurality of the coded frames according to a second protocol, and insert the packet into a first basic transmission unit at a rate of one packet per unit for transmission to a first end of a low-bit-rate artery;

a first multiplexer device associated with the first end of the low-bit-rate artery, wherein the multiplexer device is configured to extract the packet from the first basic transmission unit and from first basic transmission units received from different originating terminals, and to multiplex the extracted packets into a second basic transmission unit for transmission to a second end of the low-bit-rate artery;

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a second multiplexer device associated with the second end of the low-bit-rate artery, wherein the multiplexer device is configured to extract the packets from the second basic transmission unit, determine the terminating terminal to which each of the packets belong, and insert each of the packets into a third basic transmission unit for transmission to the terminating terminal; and

a second adaptation unit associated with the terminating terminal, wherein the second adaptation unit is configured to extract the packets from the third basic transmission unit, extract the coded frames from the packets, and decompress the coded frames to recreate the data from the originating terminal.

23. (New) A network configured to convey data between at least two terminals, comprising:

one or more low-bit-rate arteries;

one or more standard-bit-rate arteries;

a first adaptation unit associated with an originating terminal, the first adaptation unit configured to receive data from the originating terminal, convert the received data into coded frames, form a packet of application data comprising a plurality of the coded frames, and insert the packet into a first basic transmission unit for transmission to a first end of a low-bit-rate artery;

a first multiplexer device associated with an upstream switch at the first end of the low-bit-rate artery, the first multiplexer device configured to extract the packet from the first basic transmission unit and from a first basic transmission unit received from a different originating terminal, and to multiplex the extracted packets into a second basic transmission unit for transmission to a second end of the low-bit-rate artery;

a second multiplexer device associated with a downstream switch at the second end of the low-bit-rate artery, the multiplexer device configured to extract the packets from the second

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basic transmission unit, determine the terminating terminal to which each of the packets belong, and insert each of the packets into a third basic transmission unit for transmission to the terminating terminal; and

a second adaptation unit associated with the terminating terminal, the second adaptation unit configured to extract the packets from the third basic transmission unit, extract the coded frames from the packets, and recreate the data from the coded frames.

24. (New) The method of claim 1, wherein transmitting the basic transmission unit from the first end to the second end of the low-bit-rate artery automatically occurs at the end of an adjustable time lag which is set when a first packet of application data is inserted into the basic transmission unit.

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